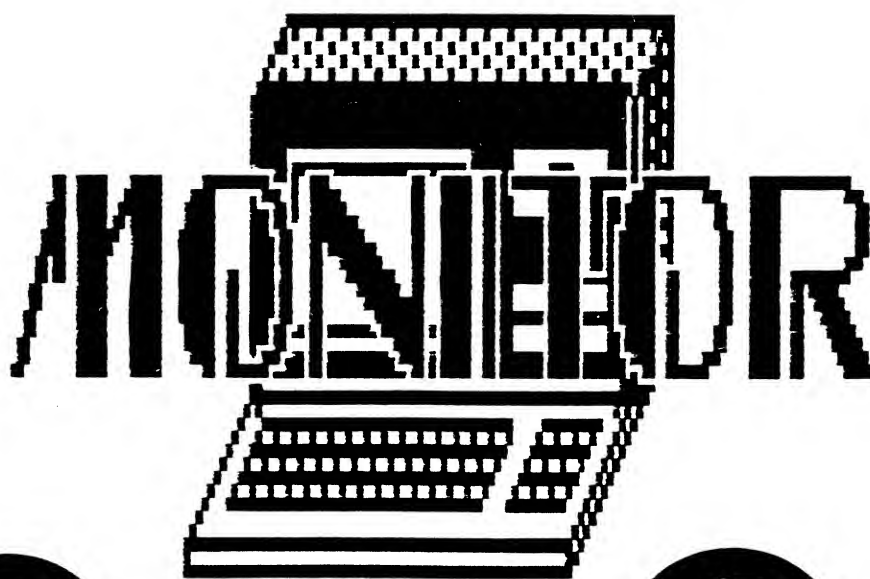


THE  
EYES  
BUGS



SUMMER 1987!

## OBLIGATORY STUFF

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ASS'T LIBRARIAN	Randy Sloboda
EDITOR	Ken Danylczuk
ASS'T EDITOR	Greg Rezanoff
MEMBERS AT LARGE	Steve Bagues
	Harry Chong

THE MONITOR is published monthly by the COMMODORE USERS' GROUP OF SASKATCHEWAN (CUGS), Regina, Sask., Canada. It is distributed at each monthly CUGS meeting, held at 7 pm, the FIRST WEDNESDAY of every month. Meetings are usually held in the North-West Leisure Centre, at the corner of Rochdale Boulevard and Arnason St., Regina.

Anyone interested in computing, especially on the C64, 128 or 64C, is welcome to attend any meeting. Out of town members are welcome, but may be charged a small mailing fee for newsletters. Members are welcome to submit public domain software for inclusion in the CUGS DISK LIBRARY. Any member may purchase disks from the club library for a nominal fee. The club library looks for programs listed in such magazines as COMPUTE, GAZETTE, RUN, AHOY, TPUG, COMMODORE COMPUTING, etc. these programs are made available to members who purchase the magazines.

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## EDITORIAL

Summer's gone - kid's goin' back to school - yard's turning yellow and filling with leaves - garden turning black from frost - stores are setting out HALLOWE'EN CANDY and costumes (!!!) ... AND THE "CRAZIES" AT CUGS ARE BACK AT IT AGAIN!!! - Yep ... it's fall, alright!

This issue (coming to you courtesy your executive and Canada Post WE HOPE!) we'll keep it "light" and you can consider this a combined EDITORIAL/CRYSTAL BALL article. Next month, I'll get intense once more.

But seriously folks, I hope you have enough summer memories to warm your winter, and I hope you're as anxious as I to get back into hobby computing (at least, that's what I call it - my wife calls it an obsession). Actually, like many of your machines, my computer didn't get the summer off. Especially as an executive member, I've been working with the others on our "revamp" of the club DISK LIBRARY. While we're a little behind schedule (we learned that phrase from COMMODORE CANADA!), we've got a respectable number of disks done and listed. Done means SORTED, CATALOGED, CHECKED FOR OPERATION, ANNOTATED AND PLACED IN A COLLECTION WITH A LOADER PROGRAM!

Our fall planning this year will centre in on COMMUNICATIONS. In a short survey of some of our club faithful over the last couple of spring meetings, we determined that many were INTERESTED in computers for COMMUNICATION, but few had become involved mostly due to too little information. Well, we're gonna fix all that! Starting with the September meeting, we intend to make some topic on communication a regular part of each meeting's presentation. We'll continue until our members know it all or feel they've learned enough!

We hope to feature a COMMUNICATIONS article in each issue of the MONITOR to complement the presentations, as well as the columns you've come (WILL come, to new members) to know and love! (e.g. the EDITORIAL).

TUNE IN NEXT MONTH FOR "DAVID VS GOLIATH"  
(SUBTITLE: THE C64/128 VS THE "KILLER-BYTE" MACHINES!)

## zzzzZIPPERSsss

### Housecleaning for Your Computer

by HARRY CHONG

Computers get ornery for many reasons, although electrical jolts, heat and dirt are the principal causes. Following are some suggestions on how to stay on top of these gremlins:

-Set your computer up in a clean, dry, well-lighted area. Damp, dusty, smoky, hot or greasy atmospheres are absolute NO-NO's.

-A particle of cigarette ash can act like a boulder to a disk drive head so, butt out.

-Crumbs and liquids spilled on or into a keyboard, disks or tapes are disastrous.

-Beware of GREASY hands, STICKY fingers - who needs 'em? Your COMPUTER don't - fer sure.

-OFF LIMITS to pets. Cat and dog hairs get into keyboards, disk drives and disk envelopes, causing lots of mischief.

-Periodically vacuum the outer surfaces of your equipment.

-If you dust, use a cotton cloth - they do not generate static electricity.

-Never use an 'IONIZER' near your computer. This device causes your system to attract the dust that normally floats aimlessly around the room. Anything that increases static should be avoided.

-Just remembered something I read - can't quite put my finger on the source. If you do your computing off and on through the day, and if you have a fan keeping your equipment cool, then it's best to leave your system on. Turning it off and on too many times could put it into electrical shock. Some people virtually never turn their systems off. One BIG exception: if an electrical storm is on the horizon, turn everything off and pull the MASTER PLUG!

A CAUTIONARY NOTE: BRIGHTNESS KILLS! Keep your brightness control turned down when you're not computing. Overly bright displays are bad for the EYES, and shorten screen life.

# SIR RICHARD'S BASIC

by RICHARD MAZE

Last month I looked at one-dimension arrays. I examined what an array is and some methods of putting data into an array. In this article I want to explore two-dimension arrays and some further uses of arrays in programs.

If we visualize an array as a shelving unit, then a one-dimension array is simply a vertical set of shelving, each shelf having the same variable name with a number representing its position in the unit. For example, an array NA\$ could have 21 shelves numbered from 0 to 20. Referring to a certain shelf would simply mean referring to the NAME of the array followed by the NUMBER of the shelves (in parentheses). NA\$(14) refers to the data stored on SHELF NUMBER 14 of the UNIT called NA\$.

A one-dimension array has a "VERTICAL" component only. This consists of the number of shelves. A TWO-dimension array has BOTH A VERTICAL AND HORIZONTAL component. Think of it as a shelving unit with several shelving units standing side-by-side. Such an array is treated exactly like the one-dimension arrays except BOTH dimensions must be expressed. For example: to store a number of names, streets, cities and provinces in ONE array, the VERTICAL component for this array might be the NUMBER of PEOPLE we want (say 20). The HORIZONTAL component would be a SET OF SHELVES EACH for NAME, ADDRESS, CITY and PROVINCE (total of 4). If we used the array name DA\$ to hold this data then we set up the array using the DIM statement as: DIM DA\$(20,4). Note that the vertical component is first and the horizontal component second. A comma separates the two components. (NOTE: the array actually has 21 vertical and 5 horizontal shelves because a shelf 0 exists in each direction. Usually, the 0 shelf is not used because it can create counting confusion). A particular set of data can be retrieved by referring to its position in the unit. For example, the CITY for the 13th person would be DA\$(13,3), the NAME of the 16th person is DA\$(16,1). Remember, the data must be all of one TYPE (string or numeric). The TYPE of data to be stored in the array is set by the DIM statement. You cannot mix string and numeric variables in the same array.

TWO-dimension arrays are most often referenced using NESTED loops (loops within loops). If you have data to put into the array and the data is in the order: NAME, ADDRESS, CITY, PROVINCE, you could fill the array using the following program segment:

```
100 REM FILL ARRAY DA$ USING READ
110 DIM DA$(20,4):REM 1 ARRAY WITH 21 X 5 SHELVES
120 FOR I = 1 TO 20:REM IGNORE SHELF 0
130 :   FOR J = 1 TO 4:REM IGNORE 0 HERE TOO
140 :     READ DA$(I,J)
150 :   NEXT J
160 NEXT I
```

If the data was in the order: all NAMES, then all ADDRESSES, then CITIES, then all PROVINCES you simply change the order of the loops so the program becomes:

```
100 REM FILL ARRAY DA$ USING READ
110 DIM DA$(20,4):REM 1 ARRAY WITH 21 X 5 SHELVES
120 FOR J = 1 TO 4:REM IGNORE SHELF 0
130 :   FOR I = 1 TO 20:REM IGNORE 0 HERE TOO
140 :     READ DA$(I,J)
150 :   NEXT I
160 NEXT J
```

Like one-dimension arrays, two-dimension arrays can be filled using the results of calculations, INPUT, GET or READING files off disk. The main advantage of TWO-dimension arrays over one-dimension arrays is that they allow storing large amounts of RELATED data using only one variable.

Arrays are often used in the following situations within a program:

- with large amounts of related data
- adventure games (rooms and contents)
- databases (address files, etc.)
- calculations (sales records, etc.)
- disk catalogs
- whenever data is to be sorted
- when data is brought in from a disk file

The major advantage of using an array is the control of variables a programmer has. It is much easier to keep track of one or two array variables than the number of variables needed without the array. Another advantage is that programs are often shorter because data is accessed and used in short loops - impossible with a large number of separate variables. A third (and probably most important) advantage is the large quantity of data that can be stored and made easily available in an array.



**NOTICE!**  
**FIRST FALL C.U.G.S. MEETING**  
**WED. SEPT. 2. 7:30 PM**  
**NORTHWEST LEISURE CENTRE**

**NEXT MEETING:**

**WED. OCTOBER 14 (N.B.)**

# ML from Ed

## THE SCROLL OF THE WILD (ED, THAT IS)

by ED DIETRICH

### LINE SCROLL WEDGE

This program is similar to last month's. It will scroll the top line of the screen from right to left. One difference is that it moves color memory along with screen memory so that different colored text scrolls. Another change is that this program is 'wedged' into the TIMER INTERRUPT of the computer's operating system. This means that the computer handles the line scrolling AUTOMATICALLY no matter what kind of program is running or whether one is running at all. The only drawback to this technique is that it creates timing irregularities during disk access. Because of this, it is wise to switch off the scrolling before accessing the drive.

To enable scrolling type SYS 49152 and press RETURN.

To disable scrolling type SYS 49170 and press RETURN.

To change the scroll speed POKE 49189 with any number from 1-255. The higher the number, the slower the scroll speed. Change speed only when the scrolling is not active.

To enter the program use XMON64C(50135) from our Club PROGRAMMING Library Disk. Ignore the line numbers. They're for reference only.

The program starts at \$C000 (49152 decimal). The first line entered should be;

.A C000 SEI

Type in the rest of the program following the prompts.

1. SEI	16. RTS	31. LDA \$C065
2. LDA #\$14	17. DEC \$C064	32. STA \$0400,X
3. STA \$C064	18. BNE \$C061	33. LDX #\$00
4. LDA #\$1F	19. LDA #\$14	34. LDY #\$01
5. STA \$0314	20. STA \$C064	35. LDA \$D800
6. LDA #\$C0	21. LDX #\$00	36. STA \$C065
7. STA \$0315	22. LDY #\$01	37. LDA \$D800,Y
8. CLI	23. LDA \$0400	38. STA \$D800,X
9. RTS	24. STA \$C065	39. INY
10. SEI	25. LDA \$0400,Y	40. INX
11. LDA #\$31	26. STA \$0400,X	41. CPY #\$28
12. STA \$0314	27. INY	42. BCC \$C04F
13. LDA #\$EA	28. INX	43. LDA \$C065
14. STA \$0315	29. CPY #\$28	44. STA \$D800,X
15. CLI	30. BCC \$C033	45. JMP \$EA31

### Notable Memory Locations:

\$0314 & \$0315 - HARDWARE INTERRUPT VECTOR (\$EA31).  
\$0400 - Beginning of SCREEN MEMORY in RAM.  
\$D800 - Beginning of COLOR MEMORY in RAM.  
\$EA31 - Beginning of Commodore 64 TIMER INTERRUPT handling routine (house-keeping tasks).

### A Brief EXplanation:

Lines 1-9 enable the 'interrupt wedge'.  
Lines 10-16 disable the wedge and return interrupt handling to normal.

Lines 17 & 18 are a timing loop to slow down the scrolling speed by a factor of twenty. As the interrupt occurs sixty times per second, the scroll speed would otherwise be sixty characters per second (pretty, but illegible).

Lines 18-44 form our 'wedge' program.

Lines 19 & 20 reload our timer with a value of twenty.

Lines 21 & 22 prepare the X & Y registers to be used for indexed addressing to move the contents of the top line of the screen left one character.

Lines 23 & 24 copy the character in the top left hand corner of the screen to a temporary memory location.

Lines 25-30 are a loop which move the top line characters to the left one by one.

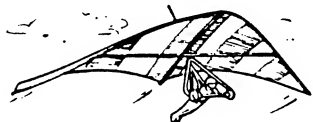
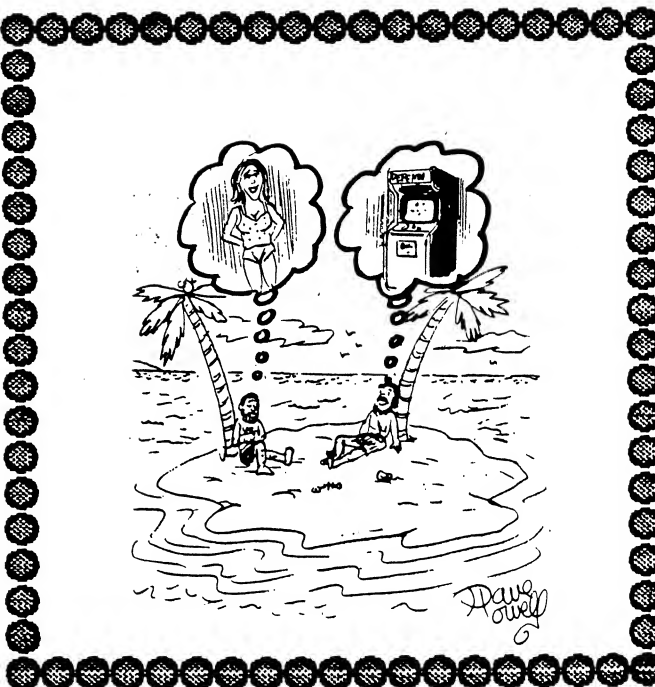
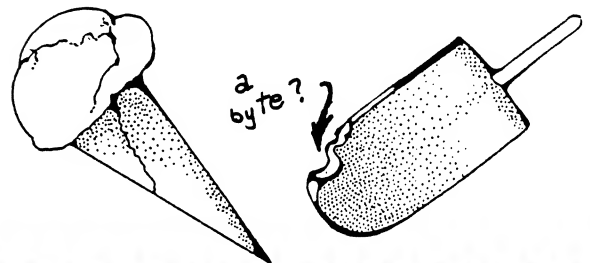
Lines 31 & 32 copy the contents of the temporary memory location to the top right corner of the screen enabling the 'wrap-around' feature of the scroll.

Lines 33-44 are identical to lines 21-32 except that they move the top line of the color RAM as opposed to the screen RAM.

Line 45 jumps to the beginning of the normal timer interrupt routine which performs the computer's house-keeping tasks and returns control to the main program (if one is running).

This program, once entered, can be saved from within XMON with the command;

.S "O:filename",08,C000,C064



# Disk-Etiquette

## CUGS DISK LIBRARY NOTES



by Earl Brown

Well, how are you all? The summer is over and I do hope you had a good one. Personally it was much too short for me.

The disk library has not had a complete "overhaul", but you can tell by the new catalogue, we managed to get quite a lot done. By next month, I hope the transition will be complete for the 64 programs, as well as several disks prepared for 128 owners. We have the programs, it's just a matter of checking them out and "ID"-ing them into CUGS own library. When you purchase most new disks from our 64 library, you'll notice the first program is entitled "UGS LOADER". This fine menu driven loader, was written by our club president, Richard Maze in BASIC. It will soon have a customizing ML routine added, being written by our former president and ML guru, Ed Dietrich. By listing the program, any member should be able to include a scrolling message of his/her own choosing as well as a screen color change for your own personal use.

The loader program also loads a sequential file entitled "CUGS DATA". If you load this file into a word processor (seq), you can see how it's made up, and be able to make your own with the same word processor. Richard is planning to write a basic program for those who would rather use a prompt routine for creating this file instead of a word processor. This program will be included on a future disk. A word of warning regarding this CUGS LOADER program should be mentioned. Every program it loads, including BASIC ones, uses the ",8,1". So, if the loader program fails to load any BASIC program properly identified in the seq. file "CUGS DATA", that program may not be located at the usual C-64'S start of BASIC (there are different reasons why this might be). In that case, your best bet would be: (1) load that particular program manually using the standard ",8" routine - (2) make sure you've loaded it, (3) scratch the original program from the disk, and (4) save the program again under the same name (using ",8"). The CUGS LOADER should now load the file.

Use this shortcut to load and run the LOADER:

10",8: (shifted run/stop)

We appreciate your comments on our new (and improved?) library.



### AGENDA:

WELCOME ADDRESS - PRES. RICHARD MAZE

PRESENTING THE "NEW IMPROVED" CUGS DISK LIBRARY!

\*\*\*\* Coffee \*\*\* Visits \*\*\* Library Checking \*\*\*\*

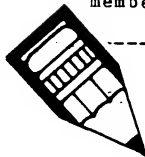
IF A BAUD-Y MEET A BAUD-Y DOWNLOADING ON THE LINE!

(AN HONEST-TO-GOODNES, REAL B E G I N N E R S  
INTRODUCTION TO TELECOMMUNICATING.)



# Members' Marketplace

(N.B. - several of these advertisements were received in JUNE so some items listed may no longer be available. Remember the MONITOR runs ads for members for FREE!



## FOR SALE

OKIMATE 10 COLOR PRINTER with PLUG AND PRINT MODULE for C64/128. Like new and in original packing. \$275 o.b.o. Call BARRY at 359-1925.

WANTED! - copy of SCHEMATIC for TI99 computer. Call BARRY at 359-1925.

## FOR SALE

## FOR SALE

\*\*\*\*\* FOR SALE \*\*\*\*\*

C-64 Computer  
1541 Disk Drive  
TECH-SKETCH Light Pen(Micro Illustrator) Program  
Disk included  
COMvoice(Genesis)Voice Synthesizer for the C64  
SIDEWAYS(Timeworks)for C64 & C128

If interested, please PHONE Harry Chong at 337-2142 and make an offer.



## FOR SALE

I have an EPSON FX-80 printer with tractor feed and IEEE input for sale. Ideal for all PET computers or a C-64 with a proper interface. Original cost \$900.00 <> Asking \$400.00. Call EARL BROWN - 543-2068.

## NOTICE

The FIRST EDITION  
of the all-new  
CUGS DISK LIBRARY  
CATALOGUE  
will be available  
to all club members  
at our first fall meeting  
WED. SEPT 2, 7:30 pm

Unfortunately, a delay prevented us from mailing them as originally intended, BUT THEY'RE WORTH THE WAIT!

# Bulletin Board List

REGINA Bulletin Boards

Date:23/05/87

BBS	Name	Phone	Hours	baud rate
Abyss		584-0721	24 hrs.	300
Bit Bucket BBS		352-3236	6pm-8am, Sun.	300/1200
DUH Systems BBS		545-6953	24 hrs.	
DataPac 1200		565-0181	24 hrs.	1200
DataPac 2400		565-6000	24 hrs.	2400
DataPac 300		565-0111	24 hrs.	300
Digital Dimensions.		586-6493	24 hrs.	300/1200
Genesis		345-2265	6pm - 7am	3/12/2400
Micro City 1		584-0747	24 hrs.	300/1200
Micro City 2		584-0748	24 hrs.	300/1200
Mouse Trax (Apple)		359-7055	5pm - 8am	300/1200
Negative Zone		565-8538	24 hrs.	300/1200
Onyx FOG # 50 RCP/M		949-1564	24 hrs.	3/12/2400
Orion		789-9754	24 hrs.	300/1200
Parkland Opus		543-9159	24 hrs.	3/12/2400
Polestar Opus		586-1551	24 hrs.	3/12/2400
Probable Fate System		525-1054	24 hrs.	300
R.A.T. 2		949-6105	24 hrs.	300/1200
Regina Fido		347-4493	24 hrs.	3/12/2400
Sask-Ed-Net 1		525-3973	24 hrs.	300/1200
Sask-Ed-Net 2		522-1998	24 hrs.	300/1200
Shadowland		789-7883	6pm-8am, Sun	300/1200
Tesseract		757-5699	24 hrs.	300/1200
Trip. Diam. CompuMag		775-3314	24 hrs.	300
Turbo BBS		586-7560	24 hrs.	300/1200
Ultra Fast Systems		545-5717	24 hrs.	300/1200
Unibase 1 (E.M.I.S.)		584-2035	24 hrs.	300/1200
Unibase 2 (E.M.I.S.)		586-5585	24 hrs.	300/1200

## G. R. PHONE HOME!

by GREG REZANSOFF

Over the next few months, Cugs will be presenting a series of interesting and informative talks on computer communication. A small survey made it quite clear to see that many club members have some interest in the topic.

Much of the information will be intended for the new user, starting with the very basic concepts, and moving to the more technical aspects. Along with this, I have planned to do software reviews of several different terminal packages in the MONITOR.

The terminal program is the single most important piece of software in computer communication, and deserves our attention. These reviews will describe each program and rate it on several characteristics. This will hopefully allow you to compare and decide which best suits your needs.

### TERMINAL PACKAGE review #1: "CBTERM"

Originally created by the people at COMPUSERVE, CBTERM64 is a versatile and powerful piece of software which takes full advantage of the power of a modem. Not only is it versatile, but its price is terrific. CBTERM is in the public domain, which means it is FREE for the taking. This may be important if you are concerned with keeping expenses to minimum.

CBTERM64, like most terminals, is equipped to handle parity, baud rate, manual and auto dialing, and a few other things. Although it does not have a "telephone book" like many commercial packages, the options available will suffice in most situations.

As you use the program, you'll find that many of its commands are for handling files, or incoming information. It has a large (22k to be exact) buffer size that can be edited, saved, or transmitted over the modem. It not only handles ASCII files, but has x-modem protocol, for

uploading and downloading programs.

Regarding visual output and graphics, CBTERM has a few features which aid in viewing and typing. Both 40 column and 80 column modes are supported, so information will be properly formatted on the screen. In 80 column mode, a command line is displayed on the bottom of the screen allowing you to type data in before it is sent (allowing for quicker and smoother access).

With all these features, it is easy to see that CBTERM64 can be a useful piece of software for the beginner, or for someone who needs a "rough and ready" terminal program. In either case, there is no reason not to have a copy of it - it is public domain, and free to anyone who wants it.

It is listed in the CUGS library along with several others, or you can get a copy of it from me, or from several bulletin boards here in Regina.

## WHAT I DID FOR



('CAUSE THEY SURE DON'T PAY ME!)

by Steve Bagues

(Editor's note: We intended to print a paragraph from each club executive member describing his/her job for the interest of new and old members, but only Steve was brave enough to respond [so far!]. Election-time's just two months off, and some of you should consider serving a year or two. Read what Steve has to say!)

A few weeks ago Ken asked me to try and define what a "member at large" (Steve is a CUGS MEMBER AT LARGE) really was, and what his duties were. I was to touch on any high points during my tenure.

The best definition I could come up with is - a MEMBER AT LARGE is a person that can assist the other executive members in the completion of their proper duties in the club.

When I joined the executive as a MEMBER AT LARGE, I felt a bit like the "new kid on the block". I had a little BASIC training and very little experience with machine language. I certainly began to wonder what I could do to help the club.

This feeling passed after the first executive meeting or two. I soon began to learn the ropes of the club's operation by watching the senior executive members at work. I must admit, my thoughts of long hours of dull work and thankless dedication were false.

The executive was so well organized that all the club functions were split equally and fairly according to the talents of the member. I found that the jobs I was assigned were interesting and turned out to be a lot of fun, too. In fact, I would say that the chance I had to explore the old club disk library for the new led me to find many interesting programs and utilities that I now use on a regular basis.

In the past year, I have found that my knowledge of the C64 has increased greatly thanks to the help and assistance of the senior executive. There have been several occasions that they have helped me through a tough hardware or software problem.

I can safely say that the club has made great strides forward after the unexpected departure of many long-time members to the AMIGA USERS' GROUP. The club paper, the MONITOR, has been re-established, the DISK LIBRARY is undergoing revision, we had a super display at the first COMPUTERFEST last February, and club membership is on the rise!

In short, I personally feel that anyone who would like to get a bit more involved in the club would find a year or two on the executive well worth the small effort, and a lot of fun to boot!